

We Claim:

1. A process for treating a reverse osmosis membrane with a biocide to kill bacteria on or in the vicinity of said membrane comprising contacting said reverse osmosis membrane with an oxidizing halogen biocide in combined form which slowly releases said halogen in sufficient amount to disinfect said membrane and to kill said bacteria and thereby eliminate or prevent biofilm on said membrane.

2. The process according to claim 1 wherein the halogen biocide is a combination of an oxidizing biocide substance that contains a halogen in the +1 oxidation state and a nitrogen containing compound which contains at least one nitrogen atom in the imide or amide form, such that the halogen loosely binds with the nitrogen thereby forming combined halogen.

3. The process according to claim 1 wherein the oxidizing biocide is a halogen containing biocide that includes nitrogen in the imide or amide form.

4. The process according to claim 2 wherein the halogen is bromine.

5. The process according to claim 1 wherein the biocide is bromochlorodimethylhydantoin.

6. A process for treating water with a reverse osmosis membrane for desalination of said water, comprising contacting said water upstream from said membrane with an oxidizing halogen biocide to kill bacteria on or in the vicinity of said membrane, wherein said biocide contains an oxidizing halogen in combined form which slowly releases said halogen in sufficient amount to disinfect said membrane and to kill said bacteria and thereby eliminate or prevent a biofilm on said membrane.

7. The process according to claim 6 wherein the halogen biocide is a combination of an oxidizing biocide substance that contains a halogen in the +1 oxidation state and a nitrogen containing compound that contains at least one nitrogen atom in the imide or amide form, such that the halogen loosely binds with the nitrogen thereby forming combined halogen.
8. The process according to claim 6 wherein the oxidizing biocide is a halogen containing biocide that includes nitrogen in the imide or amide form.
9. The process according to claim 6 wherein the halogen is bromine.
10. The process according to claim 6 wherein the biocide is bromochlorodimethylhydantoin.
11. The process according to claim 6 further comprising providing said biocide in the form of a solid compact, dissolving said solid compact to form a concentrated solution of said biocide and feeding said concentrated solution of the biocide into the water.
12. The process according to claim 11 wherein the concentrated solution is fed into the water at such a rate so as to provide from 0.05 to 4 ppm total halogen at the point of contact with the membrane.
13. The process for treating water with a reverse osmosis membrane according to claim 6 wherein a suspension or solution containing said biocide is introduced into a stream of water at such a rate so as to provide from 0.05 to 4 ppm total halogen on said membrane to kill said bacteria and thereby eliminate or prevent a biofilm on said membrane.
14. The process according to claim 13 wherein the biocide is a halogen containing compound that includes nitrogen in the imide or amide form.
15. The process according to claim 14 wherein the halogen is bromine.

16. The process according to claim 13 wherein the biocide is bromochlorodimethylhydantoin.

17. A process for treating a reverse osmosis membrane made of polyamide with a biocide to kill bacteria on said membrane comprising contacting said reverse osmosis membrane with a stream of water containing an oxidizing biocide that contains a halogen in combined form which slowly releases said halogen in sufficient amount to disinfect said membrane and to kill said bacteria and thereby eliminate or prevent a biofilm on said membrane.